

**CITY OF FIRTH (PWS 6060016)**  
**SOURCE WATER ASSESSMENT FINAL REPORT**

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**January 21, 2003**



**State of Idaho**  
**Department of Environmental Quality**

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## Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area, sensitivity factors associated with the wells and aquifer characteristics.

This report, *Source Water Assessment for the City of Firth, Idaho* describes the public water system (PWS), the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The City of Firth (PWS # 6060016) is a community drinking water system that is located in Bingham County). The system consists of three well sources and one storage reservoir. The wells serve approximately 400 persons through 154 unmetered connections. The wells are manifolded together and are located in the same wellhouse that is adjacent to the storage reservoir. This assessment will focus on Well #1 and Well #2. Well #3 has not been delineated and will be appended to this document at a later date.

The potential contaminant sources within the delineation capture zones include aboveground storage tank (AST) sites, underground storage tank (UST) sites, leaking underground storage tank (LUST) sites, sand and gravel pits, dairies, and landfills. Also found were sites regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA), the Resource Conservation Recovery Act (RCRA), the National Pollutant Discharge and Elimination System (NPDES), and the Toxic Release Inventory (TRI). Other sources identified that may contribute to the overall vulnerability of the water sources were the extensive irrigation canal systems and business within the delineated areas that may be considered potential contaminant sources. Additionally, Highway 26/91 and a railroad are transportation corridors that cross the delineation. If an accidental spill occurred from one of these corridors, inorganic chemical (IOC; i.e., nitrates) contaminants, volatile organic chemical (VOC; i.e., petroleum products) contaminants, synthetic organic chemical (SOC; i.e., pesticides) contaminants, or microbial (i.e., bacteria) contaminants could be added to the aquifer system. A complete list of potential contaminant sources is provided with this assessment (Appendix A).

For the assessment, a review of laboratory tests was conducted using the State Drinking Water Information System (SDWIS). Coliform bacteria were detected at various locations in the distribution system. The last detection of coliform bacteria in the distribution system was recorded in December 2000. The IOCs arsenic, fluoride, mercury, and nitrate have been detected in the drinking water, but at levels below the maximum contaminant levels (MCL) for each chemical as set by the EPA. Arsenic was detected at a concentration of 0.006 milligrams per liter (mg/L) in 2001. In October 2001, the EPA lowered the arsenic MCL to 0.01 mg/L, giving systems until 2006 to comply with the new standard. No VOCs or SOCs have been detected in the drinking water.

Final susceptibility scores for the City of Firth water system were derived from equally-weighted system construction scores, hydrologic sensitivity scores, and potential contaminant/land use scores. A low rating in one or two categories coupled with a higher rating in another category results in a final rating of low, moderate, or high susceptibility. With the potential contaminants associated with most urban and heavily agricultural areas, the best score a well can get is moderate. Potential contaminants are divided into four categories: IOCs, VOCs, SOCs, and microbial contaminants. As different wells can be subject to various contamination settings, separate scores are given for each type of contaminant.

In terms of final susceptibility, the wells rated high for IOCs, VOCs, SOCs, and microbial contaminants. The wells automatically received a high rating for VOCs and SOCs due to an underground storage tank located within 50 feet of the wells. System construction and hydrologic sensitivity was high for both wells. Potential contaminant inventory and land use scores rated high for IOCs, VOCs, and SOCs and moderate for microbials for both wells.

The capture zones for the wells intersect a priority area for the SOC atrazine. The organic priority area is where more than 25% of the wells in the area show levels greater than 1% of the primary standard or other health standards (MCL for atrazine is 0.003 mg/L). Atrazine is a widely used herbicide for control of broadleaf and grassy weeds.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

An effective drinking water protection program is tailored to the particular local drinking water protection area. A community with a fully developed drinking water protection program will incorporate many strategies. For the City of Firth, drinking water protection activities should continue efforts aimed at keeping the distribution system free of microbial contaminants that may affect the drinking water quality. If microbial problems arise, the system may want to consider the addition of a disinfection system. In addition, drinking water protection activities should focus on correcting any deficiencies outlined in the sanitary survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system’s components and its capacity). The wells should maintain sanitary standards regarding wellhead protection. Also, any new sources that could be considered potential contaminant sources in the wells' zones of contribution should also be investigated and monitored to prevent future contamination. No potential contaminants (pesticides, paint, fuel, cleaning supplies, etc.) should be stored or applied within 50 feet of the wells. The water system should remove the UST that is presently adjacent to the wellhouse of Well #1 and Well #2. The UST could be replaced with one that is at least 50 feet from the wellhouse and complies with current federal UST regulations. Another option that should be investigated is converting the generator to operate using natural gas instead of diesel fuel. Land uses within most of the source water assessment area are outside the direct jurisdiction of the City of Firth. Therefore, partnerships with state and local agencies, and industrial and commercial groups should be established to ensure future land uses are protective of ground water quality. Educating employees and the public about source water will further assist the system in its monitoring and protection efforts.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan. Public education topics could include household hazardous waste disposal methods and the importance of water conservation to name but a few. There are multiple resources available to help water systems implement protection programs, including the Drinking Water Academy of the EPA. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture and the Bingham County Soil and Water Conservation District. As major transportation corridors intersect the delineation (such as Highway 26/91), the Idaho Department of Transportation should be involved in protection efforts.

A system must incorporate a variety of strategies in order to develop a comprehensive drinking water protection plan, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (e.g. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Pocatello Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

# SOURCE WATER ASSESSMENT FOR CITY OF FIRTH, COUNTY, IDAHO

## Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are contained in this report. The list of significant potential contaminant source categories and their rankings used to develop this assessment is also attached.

### Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water supply system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the public water system (PWS).**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. DEQ recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a drinking water protection program should be determined by the local community based on its own needs and limitations. Wellhead or drinking water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

## Section 2. Conducting the Assessment

### General Description of the Source Water Quality

The City of Firth (PWS # 6060016) is a community drinking water system that is located in Bingham County (Figure 1). The system consists of three well sources and one storage reservoir. The wells serve approximately 400 persons through 154 unmetered connections. The wells are manifolded together and are located in the same wellhouse that is adjacent to the storage reservoir. This assessment will focus on Well #1 and Well #2. Well #3 has not been delineated and will be appended to this document at a later date.



Coliform bacteria were detected at various locations in the distribution system. The last detection of coliform bacteria in the distribution system was recorded in December 2000. The inorganic chemicals (IOCs) arsenic, fluoride, mercury, and nitrate have been detected in the drinking water, but at levels below the maximum contaminant levels (MCL) for each chemical as set by the EPA. Arsenic was detected at a concentration of 0.006 milligrams per liter (mg/L) in 2001. In October 2001, the EPA lowered the arsenic MCL to 0.01 mg/L, giving systems until 2006 to comply with the new standard. No volatile organic chemicals (VOCs) or synthetic organic chemicals (SOCs) have been detected in the drinking water.

### **Defining the Zones of Contribution--Delineation**

The delineation process establishes the physical area around the well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel (TOT) zones (zones indicating the number of years necessary for a particle of water to reach a pumping well) for water in the aquifer. Washington Group International (WGI) was contracted by DEQ to define the public water system's zones of contribution. WGI used a refined computer model approved by the EPA in determining the 3-year (Zone 1B), 6-year (Zone II), and 10-year (Zone III) TOT for water associated with the East Margin Area of the Eastern Snake River Plain (ESRP) hydrologic province in the vicinity of the City of Firth. The computer model used site-specific data, assimilated by WGI from a variety of sources including well logs (when available), operator records, and hydrogeologic reports. A summary of the hydrogeologic information from the WGI report is provided below.

### **Hydrogeologic Conceptual Model**

The East Margin Area encompasses 821 square miles, representing approximately 8 percent of the total area of the ESRP hydrologic province. The majority of the East Margin Area is within Bingham County, with small areas occurring in Bannock, Bonneville, and Power counties.

The regional ESRP aquifer is the most significant aquifer in the East Margin Area and consists primarily of basalt of the Quaternary-aged Snake River Group. However, additional water-bearing units are used for water supply along the margin of the ESRP. In order of decreasing age, the most significant aquifers in the Michaud Flats area are bedded rhyolite (volcanic rock) of the Tertiary-aged Starlight Formation and Quaternary-aged gravels of a low relief plain formed by running water (pediment), basalt of the Big Hole Formation, and stream deposits of the Sunbeam Formation (see Jacobson, 1982, p. 7, and Corbett, et al., 1980, pp. 6-10). A few shallow domestic wells in the central Michaud Flats area also are completed in Michaud Gravel, which is the shallow water-table aquifer. The American Falls Lake Beds Formation (AFLB) confines the deeper aquifers and averages 80 feet in thickness in the central Michaud Flats area (Jacobson, 1984, p. 6). The AFLB pinches out in the eastern Michaud Flats area near the Portneuf River, effectively combining the shallow and deep stream deposits into a single water table aquifer (Bechtel, 1994, p. 2-2). Other aquifers in the East Margin Area include fractured quartzite that has been developed near Blackfoot, stream deposits near the cities of Firth and Basalt.

PWS wells in the East Margin Area of the ESRP province produce water from five different aquifers: the Regional Eastern Snake River Plain aquifer, three alluvial (or stream deposited) aquifers (Eastern Michaud Flats, Firth/Basalt, and Gibson Terrace/Pocatello Bench) and a quartzite aquifer (Blackfoot).



## **Regional Eastern Snake River Plain Aquifer**

The ESRP is a northeast trending basin located in southeastern Idaho. The 10,000 square miles of the plain are primarily filled with highly fractured layered Quaternary-aged basalt flows of the Snake River Group, which are between (intercalated) layers of rocks formed by sediment deposition (sedimentary) along the margins (Garabedian, 1992, p. 5). Quaternary-aged basalts are estimated to be 100 to 1,500 feet thick, with the majority of the area in the range of 100 to 500 feet thick (Whitehead, 1992, Plate 3). Individual basalt flows range from 10 to 50 feet thick, averaging 20 to 25 feet thick (Lindholm, 1996, p. 14). Basalt is thickest in the central part of the eastern plain and thins toward the margins. Whitehead (1992, p. 9) estimates the total thickness of the flows to be as great as 5,000 feet. A thin layer (0 to 100 feet) of windblown and stream-produced sediments overlies the basalt. The plain is bounded on the northeast by rocks of the Yellowstone Group (mainly rhyolite) and Idavada Volcanics to the southwest. These rocks may also underlie the plain (Garabedian, 1992, p. 5). Granite of the Idaho batholith borders the plain to the northwest, along with sedimentary rocks and rocks changed by heat and/or pressure (metamorphic) (Cosgrove et al., 1999, p. 10). The Snake River flows along part of the southern boundary and is the only drainage that leaves the plain. A high degree of connectivity with the regional aquifer system is displayed over much of the river as it passes through the plain. However, some reaches are believed to be perched or separated from the main ground water by unsaturated rock, such as the Lewisville-to-Shelley reach. Rivers and streams entering the plain from the south are tributary to the Snake River. With the exception of the Big and Little Wood rivers, rivers entering from the north vanish into the basalts of the Snake River Plain aquifer that have a higher ability to transmit water.

The layered basalts of the Snake River Group host one of the most productive aquifers in the United States. The aquifer is generally considered unconfined, yet may be confined locally because of interbedded clay and dense unfractured basalt (Whitehead, 1992, p. 26). Whitehead (1992, p. 22) and Lindholm (1996, p.1) report that well yields of 2,000 to 3,000 gallons per minute (gpm) are common for wells open to less than 100 feet of the aquifer. Transmissivities obtained from test data in the upper 100 to 200 feet of the aquifer range from less than 0.1 square feet per second ( $\text{ft}^2/\text{sec}$ ) to  $56 \text{ ft}^2/\text{sec}$  ( $1.0 \times 10^4$  to  $4.8 \times 10^6 \text{ ft}^2/\text{day}$ ; Garabedian, 1992, p. 11, and Lindholm, 1996, p. 18). Lindholm (1996, p. 18) estimates aquifer thickness to range from 100 feet near the plain's margin to thousands of feet near the center. Models of the regional aquifer have used values ranging from 200 to 3,000 feet to represent aquifer thickness (Cosgrove et al., 1999, p.15).

Regional ground water flow is to the southwest paralleling the basin (Cosgrove et al., 1999; deSonneville, 1972, p. 78; Garabedian, 1992, p. 48; and Lindholm, 1996, p. 23). Reported water table gradients range from 3 to 100 feet/mile and average 12 feet/mile (Lindholm, 1996, p. 22). Gradients steepen at the plain's margin and at discharge locations. The estimated effective ratio of the rock's open space volume to its total volume range from 0.04 to more than 0.25 (Ackerman, 1995, p.1, and Lindholm, 1996, p.16).

The majority of aquifer recharge results from surface water irrigation activities (incidental recharge), which divert water from the Snake River and its tributaries (Ackerman, 1995, p. 4, and Garabedian, 1992, p. 11) and locally from canal leakage. Natural recharge occurs through stream losses, direct precipitation, and tributary basin underflow.

Aquifer discharge occurs primarily as seeps and springs on the northern wall of the Snake River canyon near Thousand Springs and near American Falls and Blackfoot (Garabedian, 1992, p.17). To a lesser degree, discharge also occurs through pumping and underflow.



The East Margin Area is among the most transmissive regions of the regional aquifer, therefore it has a higher ability to transmit water. A transmissivity of  $21 \text{ ft}^2/\text{sec}$  was used to represent the upper 200 feet of the regional aquifer in the East Margin Area in the three-dimensional U.S. Geological Survey (USGS) ground water flow model (Garabedian, 1992, Plate 6). The equivalent hydraulic conductivity or the rate at which water can move through permeable material is 9,072 feet per day (ft/day). This value is consistent with the range of hydraulic conductivity (9,500 to 11,708 ft/day) calculated using data from a constant-rate aquifer test conducted in 1981 (Jacobson, 1982, p. 23). This range was calculated by dividing the estimated transmissivity (228,000 to 281,000  $\text{ft}^2/\text{day}$ ) by the perforated interval of the observation well (24 feet). The geometric mean hydraulic conductivity based on analysis of specific capacity data from PWS wells (135 ft/day) is significantly lower.

A published water table map of the Upper Snake River Basin (IDWR, 1997, p. 9) indicates that the ground water flow direction in the ESRP aquifer in the East Margin Area is similar to that depicted at the regional scale (e.g., Garabedian, 1992, Plate 4).

Recharge from precipitation and surface water irrigation in the East Margin Area ranges from less than 10 to more than 20 inches per year (Garabedian, 1992, Plate 8). The low end of the range applies to the area near Blackfoot, while the high end applies to the area on the west side of American Falls Reservoir near Aberdeen.

Kjelstrom (1995, p. 13) reports an annual river loss of 280,000 acre-feet to the regional basalt aquifer for the 27.5-mile Lewisville-to-Shelley reach of the Snake River and 110,000 acre-feet for the 23.5-mile Shelley-to-Blackfoot reach. Annual river gains of 1,900,000 acre-feet for the 36.6-mile Blackfoot-to-Neeley reach are also estimated (Kjelstrom, 1995, p. 13). A seepage study conducted in the fall of 1980 on the Portneuf River showed a gain of about 560 cubic feet per second ( $\text{ft}^3/\text{sec}$ ) (405,691 acre-feet) for the 13-mile Pocatello-to-American Falls Reservoir reach (Jacobson, 1982, p. 16). The average flow in the Blackfoot River near the city of Blackfoot is low at Station #13068500 ( $5.2 \text{ ft}^3/\text{sec}$ ; USGS, 2001) compared to the flow in the Snake River near the city of Blackfoot at Station #13069500 ( $2,900 \text{ ft}^3/\text{sec}$ ; USGS, 2001).

The City of Firth wells are completed, or assumed to be completed in the regional basalt aquifer. Sources of ground water recharge are from surface water irrigation canals in the area and precipitation. The delineated source water assessment area for the City of Firth extends approximately 16 miles in a northeasterly direction and is elongated and conical in shape (Appendix B). The actual data used by WGI in determining the source water assessment delineation areas are available from DEQ upon request.

### **Identifying Potential Sources of Contamination**

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act. Furthermore, these sources have a sufficient likelihood of releasing such contaminants into the environment at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Field surveys conducted by DEQ and reviews of available databases identified potential contaminant sources within the delineation areas. The potential contaminant sources within the delineation capture zones include aboveground storage tank (AST) sites, underground storage tank (UST) sites, leaking underground storage tank (LUST) sites, sand and

gravel pits, dairies, and landfills. Also found were sites regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA), the Resource Conservation Recovery Act (RCRA), the National Pollutant Discharge and Elimination System (NPDES), and the Toxic Release Inventory (TRI). Additionally, Highway 26/91 and a railroad are transportation corridors that cross the delineation.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used at the facility. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply source.

### **Contaminant Source Inventory Process**

A two-phased contaminant inventory of the study area was conducted during November of 2002. The first phase involved identifying and documenting potential contaminant sources within the City of Firth source water assessment area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ. The second, or enhanced, phase of the contaminant inventory involved contacting the operator to validate the sources identified in phase one and to add any additional potential sources in the area. This task was undertaken with the assistance of Mr. Robert Dial. At the time of the enhanced inventory, Mr. Dial identified additional potential contaminant sources such as a diesel tank within 50 feet of the wells. A map with the well locations, delineated areas, and potential contaminant sources are provided with this report (Appendix B). Each potential contaminant source has been given a unique site number that references tabular information associated with the public water well (Appendix A).

### **Section 3. Susceptibility Analysis**

The susceptibility of the wells to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the wells, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative rankings that are derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. Appendix C contains the susceptibility analysis worksheets. The following summaries describe the rationale for the susceptibility rankings.

## Hydrologic Sensitivity

The hydrologic sensitivity of a well is dependent upon four factors. These factors are surface soil composition, the material in the vadose zone (between the land surface and the water table), the depth to first ground water, and the presence of a 50-foot thick fine-grained zone above the water producing zone of the well. Slowly draining soils such as silt and clay typically are more protective of ground water than coarse-grained soils such as sand and gravel. Similarly, fine-grained sediments in the subsurface, and a water depth of more than 300 feet from the surface, protect the ground water from contamination.

Hydrologic sensitivity was rated high for the wells (Table 1). This is based upon moderate to well drained regional soil classes within the delineated area as defined by the National Resource Conservation Service (NRCS). For Well #1, there was insufficient well log information to evaluate the vadose zone composition, the first depth to ground water, and whether there is at least 50 feet of cumulative thickness of low permeability material that could reduce the downward movement of contaminants. For Well #2, the well log indicates the vadose zone is comprised of sand, gravel, boulders, and clay material. The depth to first ground water was encountered at 25 feet below ground surface (bgs) and there is a lack of at least 50 feet cumulative thickness of low permeability material above the producing zone of the well.

## Well Construction

Well construction directly affects the ability of the well to protect the aquifer from contaminants. System construction scores are reduced when information shows that potential contaminants will have a more difficult time reaching the intake of the well. Lower scores imply a system that can better protect ground water. If the casing and annular seal both extend into a low permeability unit then the possibility of cross contamination from other aquifer layers is reduced and the system construction score goes down. If the highest production interval is more than 100 feet below the water table, then the system is considered to have better buffering capabilities. When information was adequate, a determination was made as to whether the casing and annular seals extend into low permeability units and whether current public water system construction standards are met.

The system construction score rated high for the wells (Table 1). The 2002 sanitary survey (conducted by DEQ) indicates the well casings are not vented. The purpose of the vent is to vent the space between the casing and the column and prevent a vacuum from forming when the well turns on and draws down the water table. A vacuum could draw in contamination through joints or leaks in the casing or cause the well to slough. The well casing heights are adequate and the well is located inside a 100-year floodplain, which may increase the chance of contaminants being drawn into the drinking water sources by surface water flooding.

The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all PWS to follow DEQ standards. IDAPA 58.01.08.550 requires that PWS follow the *Recommended Standards for Water Works (1997)* during construction. Under current standards, all PWS wells are required to have a 50-foot buffer around the wellhead, and if the well is designed to yield greater than 50 gallons per minute (gpm), a minimum of a 6-hour pump test is required. These standards are used to rate the system construction for the well by evaluating items such as condition of the wellhead and surface seal, the thickness of the casing, etc. If all criteria are not met, the public water source does not meet the IDWR Well Construction Standards. In our search for well construction information, we were unable to locate a well log for Well #1. Because the well's construction could not be accurately assessed without a well log and knowing the approximate age of the well, it is considered that the well

does not meet the current IDWR Well Construction Standards for a PWS. Therefore, the well received a conservatively high rating in terms of system construction susceptibility to contamination. In the case of Well #2, there was insufficient information from the well log to accurately assess the well's construction, therefore, the well also received a conservatively high rating in terms of system construction susceptibility to contamination.

## Potential Contaminant Source and Land Use

The potential contaminant sources and land use within the delineated zones of water contribution are assessed to determine the well's susceptibility. When agriculture is the predominant land use in the area, this may increase the likelihood of agricultural wastewater infiltrating the ground water system. Agricultural land is counted as a source of leachable contaminants and points are assigned to this rating based on the percentage of agricultural land. The predominant land use within the delineated capture zones of the City of Firth wells is irrigated agricultural land.

In terms of potential contaminant sources and land use susceptibility the ratings are as follows. The wells rated high for IOC's (i.e., nitrates), VOC's (i.e., petroleum related products), and SOC's (i.e., pesticides) and moderate for microbial contaminants (i.e., bacteria) (Table 1).

Potential contaminant sources found within the delineated areas include an AST sites, LUST sites, sand and gravel pits, a NPDES site, RCRA sites, CERCLA sites, SARA sites, and a TRI site. The locations of potential contaminant sources and delineated TOT zones for the wells are listed in Appendix A.

## Final Susceptibility Rating

A detection of an IOC above a drinking water standard MCL, or any detection of a VOC or SOC, or a confirmed detection of bacteria at the wellhead will automatically give a high susceptibility rating to a well despite the land use of the area, because a pathway for contamination already exists. In this case, the well automatically rated high for VOC's and SOC's due to an UST located within 50 feet of the well. Additionally, potential contaminant sources within 50 feet of a wellhead will automatically lead to a high susceptibility rating. Hydrologic sensitivity and system construction scores are heavily weighted in the final scores. Having multiple potential contaminant sources in the 0 to 3-year time of travel zone (Zone 1B) and a large percentage of agricultural land contribute greatly to the overall ranking.

**Table 1. Summary of City of Firth Susceptibility Evaluation**

Drinking Water Source	Susceptibility Scores <sup>1</sup>									
	Hydrologic Sensitivity	Potential Contaminant Inventory and Land Use				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well #1	H	H	H	H	M	H	H	H*	H*	H
Well #2	H	H	H	H	M	H	H	H*	H*	H

<sup>1</sup>H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

H\* = source automatically scored high susceptibility due to UST located within 50 feet of the well.

## **Susceptibility Summary**

In terms of final susceptibility, the wells rated high for IOCs, VOCs, SOCs, and microbial contaminants. System construction and hydrologic sensitivity was high. Potential contaminant inventory and land use scores rated high for IOCs, VOCs, and SOCs and moderate for microbials.

The IOCs arsenic, fluoride, mercury, and nitrate have been detected in the drinking water, but at levels below the MCL for each chemical. Arsenic was detected at a concentration of 0.006 mg/L in 2001.

The county level agriculture-chemical use is considered high in this area due to the significant amount of agricultural land. Although there may only be a small portion of agriculture land in the direct vicinity of the well, it is useful as a tool in determining the overall chemical usage such as pesticides and how it may impact ground water through infiltration and surface water runoff. In addition, there were potential sources of contamination found within the wells' delineated TOT zones (Appendix A).

## **Section 4. Options for Drinking Water Protection**

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

An effective drinking water protection program is tailored to the particular local drinking water protection area. A community with a fully developed drinking water protection program will incorporate many strategies. For the City of Firth, drinking water protection activities should continue efforts aimed at keeping the distribution system free of microbial contaminants that may affect the drinking water quality. If microbial problems arise, the system may want to consider the addition of a disinfection system. In addition, drinking water protection activities should focus on correcting any deficiencies outlined in the sanitary survey. The wells should maintain sanitary standards regarding wellhead protection. Also, any new sources that could be considered potential contaminant sources in the wells' zones of contribution should also be investigated and monitored to prevent future contamination. No potential contaminants (pesticides, paint, fuel, cleaning supplies, etc.) should be stored or applied within 50 feet of the wells. The water system should remove the UST that is presently adjacent to the wellhouse of Well #1 and Well #2. The UST could be replaced with one that is at least 50 feet from the wellhouse and complies with current federal UST regulations. Another option that should be investigated is converting the generator to operate using natural gas instead of diesel fuel. Land uses within most of the source water assessment area are outside the direct jurisdiction of the City of Firth. Therefore, partnerships with state and local agencies, and industrial and commercial groups should be established to ensure future land uses are protective of ground water quality. Educating employees and the public about source water will further assist the system in its monitoring and protection efforts.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan. Public education topics could include household hazardous waste disposal methods and the importance of water conservation to name but a few. There are multiple resources available to help water systems implement protection programs, including the Drinking Water Academy of the EPA. Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture and the Bingham County Soil and Water Conservation District. As major transportation corridors intersect the delineation (such as Highway 26/91), the Idaho Department of Transportation should be involved in protection efforts.

A system must incorporate a variety of strategies in order to develop a comprehensive drinking water protection plan, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (e.g. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Pocatello Regional Office of the DEQ or the Idaho Rural Water Association.

### **Assistance**

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

DEQ Pocatello Regional Office      (208) 236-6160

DEQ State Office      (208) 373-0502

Website: <http://www.deq.state.id.us>

Water suppliers serving fewer than 10,000 persons may contact Ms. Melinda Harper (208) 343-7001 or email her at <mailto:mlharper@idahoruralwater.com>, Idaho Rural Water Association, for assistance with drinking water protection (formerly wellhead protection) strategies.

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USGS - see United States Geological Survey.

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## POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

**AST (Aboveground Storage Tanks)** – Sites with aboveground storage tanks.

**Business Mailing List** – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

**CERCLA** – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

**Cyanide Site** – DEQ permitted and known historical sites/facilities using cyanide.

**Dairy** – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

**Deep Injection Well** – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

**Enhanced Inventory** – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

**Floodplain** – This is a coverage of the 100-year floodplains.

**Group 1 Sites** – These are sites that show elevated levels of contaminants and are not within the priority one areas.

**Inorganic Priority Area** – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

**Landfill** – Areas of open and closed municipal and non-municipal landfills.

**LUST (Leaking Underground Storage Tank)** – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

**Mines and Quarries** – Mines and quarries permitted through the Idaho Department of Lands).

**Nitrate Priority Area** – Area where greater than 25% of wells/springs show nitrate values above 5 mg/l.

**NPDES (National Pollutant Discharge Elimination System)** – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

**Organic Priority Areas** – These are any areas where greater than 25% of wells/springs show levels greater than 1% of the primary standard or other health standards.

**Recharge Point** – This includes active, proposed, and possible recharge sites on the Snake River Plain.

**RCRA** – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

**SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities)** – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

**Toxic Release Inventory (TRI)** – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

**UST (Underground Storage Tank)** – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

**Wastewater Land Applications Sites** – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

**Wellheads** – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

**NOTE:** Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

# APPENDIX A

## City of Firth Potential Contaminant Source Inventory

**Table 2. Potential Contaminants**

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
	AST	0-3	GIS Map	IOC, VOC, SOC, Microbials
	Highway 26/91	0-3	GIS Map	IOC, VOC, SOC, Microbials
	Surface Waters	0-3	GIS Map	IOC, VOC, SOC, Microbials
	Railroad	0-3	GIS Map	IOC, VOC, SOC, Microbials
1	LUST Site-Cleanup Incomplete; Impact Unknown	0-3	Database Inventory	VOC, SOC
2	LUST Site-Cleanup Incomplete; Impact Unknown	0-3	Database Inventory	VOC, SOC
3	UST Site-Farm; Open	0-3	Database Inventory	VOC, SOC
4	UST Site-Gas Station; Closed	0-3	Database Inventory	VOC, SOC
5	UST Site-Gas Station; Closed	0-3	Database Inventory	VOC, SOC
6	UST Site-Commercial; Closed	0-3	Database Inventory	VOC, SOC
7	UST Site-Local Government; Closed	0-3	Database Inventory	VOC, SOC
8	UST Site-Utilities; Closed	0-3	Database Inventory	VOC, SOC
9	UST Site-Industrial; Closed	0-3	Database Inventory	VOC, SOC
10	UST Site-Not Listed; Closed	0-3	Database Inventory	VOC, SOC
11	UST Site-Gas Station; Open	0-3	Database Inventory	VOC, SOC
12	UST Site-Other; Closed	0-3	Database Inventory	VOC, SOC
13	UST Site-Gas Station; Open	0-3	Database Inventory	VOC, SOC
14	Dairy	0-3	Database Inventory	IOC, Microbials
15	Dairy	0-3	Database Inventory	IOC, Microbials
16	Dried/Dehydrated Fruits Veg (Mfr)	0-3	Database Inventory	IOC, Microbials
17	Automobile Repairing & Service	0-3	Database Inventory	IOC, VOC, SOC
18	Machine Shops	0-3	Database Inventory	IOC, VOC, SOC
19	Grading Contractors	0-3	Database Inventory	VOC
20	Home Improvements	0-3	Database Inventory	IOC, VOC, SOC
21	Cleaners	0-3	Database Inventory	VOC
22	Janitor Service	0-3	Database Inventory	VOC
23	Fireplace Equipment-Manufacturers	0-3	Database Inventory	IOC, VOC
24	Garbage Collection	0-3	Database Inventory	IOC, VOC, SOC, Microbials
25	Welding	0-3	Database Inventory	IOC, VOC
26	Foundries-Steel	0-3	Database Inventory	IOC, VOC, SOC
27	Golf Courses-Public	0-3	Database Inventory	IOC, VOC, SOC
28	Printers	0-3	Database Inventory	VOC
29	Funeral Directors	0-3	Database Inventory	VOC
30	Printers	0-3	Database Inventory	VOC
31	City Government-Transportation Program	0-3	Database Inventory	VOC, SOC
32	Newspapers (Publishers)	0-3	Database Inventory	IOC, VOC
33	Trailer-Manufacturers	0-3	Database Inventory	IOC, VOC, SOC
34	Truck Renting & Leasing	0-3	Database Inventory	VOC, SOC
35	Toxic Release Inventory	0-3	Database Inventory	VOC, SOC
36	RCRA Site	0-3	Database Inventory	VOC, SOC
37	RCRA Site	0-3	Database Inventory	VOC
38	RCRA Site	0-3	Database Inventory	IOC, VOC, SOC
39	Mine/Quarry	0-3	Database Inventory	IOC, VOC, SOC
40	Mine/Quarry	0-3	Database Inventory	IOC, VOC, SOC
41	SARA Site	0-3	Database Inventory	VOC, SOC
42	SARA Site	0-3	Database Inventory	IOC, VOC, SOC
43	SARA Site	0-3	Database Inventory	IOC, VOC, SOC
44	SARA Site	0-3	Database Inventory	IOC, VOC, SOC
45	SARA Site	0-3	Database Inventory	IOC, VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
46	SARA Site	0-3	Database Inventory	IOC, VOC, SOC
47	SARA Site	0-3	Database Inventory	IOC, VOC, SOC
48	Recharge Point	0-3	Database Inventory	IOC, VOC, SOC, Microbials
49	Group 1 Site	0-3	Database Inventory	VOC
50	Wastewater Land Application Site	0-3	Database Inventory	IOC, Microbials
51	Wastewater Land Application Site	0-3	Database Inventory	IOC, Microbials
825	Potato Storage	0-3	Enhanced Inventory	IOC, Microbials
826	AST	0-3	Enhanced Inventory	VOC, SOC
827	Telephone Communication, Except Radio	0-3	Enhanced Inventory	VOC
56	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Inventory	VOC, SOC
57	LUST Site-Cleanup Completed; Impact Unknown	3-6	Database Inventory	VOC, SOC
58	UST Site-Other; Closed	3-6	Database Inventory	VOC, SOC
59	UST Site-Commercial; Closed	3-6	Database Inventory	VOC, SOC
60	UST Site-Truck/Transporter; Closed	3-6	Database Inventory	VOC, SOC
61	UST Site-Not Listed; Closed	3-6	Database Inventory	VOC, SOC
62	UST Site-Not Listed; Closed	3-6	Database Inventory	VOC, SOC
63	UST Site-Other; Closed	3-6	Database Inventory	VOC, SOC
64	UST Site-Other; Closed	3-6	Database Inventory	VOC, SOC
65	UST Site-Contractor; Open	3-6	Database Inventory	VOC, SOC
66	UST Site-Other; Closed	3-6	Database Inventory	VOC, SOC
67	UST Site-Truck/Transporter; Open	3-6	Database Inventory	VOC, SOC
68	UST Site-Commercial; Closed	3-6	Database Inventory	VOC, SOC
69	Dairy	3-6	Database Inventory	IOC
70	Dairy	3-6	Database Inventory	IOC
71	Crane Service	3-6	Database Inventory	VOC, SOC
72	General Contractors	3-6	Database Inventory	IOC, VOC, SOC
73	Logging	3-6	Database Inventory	VOC, SOC
74	Fertilizers (Wholesale)	3-6	Database Inventory	IOC
75	Color-Offset Photo Engrave	3-6	Database Inventory	IOC, VOC
76	Well Drilling	3-6	Database Inventory	IOC, VOC, SOC
77	Mechanical Contractors	3-6	Database Inventory	IOC, VOC, SOC
78	Candy & Confectionery Manufacturers	3-6	Database Inventory	IOC, VOC, Microbials
79	Potato Harvesting/Planting Equipment	3-6	Database Inventory	VOC, SOC
80	Foods-Frozen Manufacturers	3-6	Database Inventory	IOC, Microbials
81	Millwork Manufacturers	3-6	Database Inventory	IOC, VOC, SOC
82	Farm Supplies (Wholesale)	3-6	Database Inventory	IOC, VOC, SOC
83	Water Works Equipment & Supplies	3-6	Database Inventory	IOC, VOC, SOC
84	Mold Makers	3-6	Database Inventory	VOC, SOC
85	Printers	3-6	Database Inventory	VOC
86	Trucking-Heavy Hauling	3-6	Database Inventory	VOC, SOC
87	Nurserymen	3-6	Database Inventory	IOC, SOC
88	Powder Coatings Manufacturers	3-6	Database Inventory	IOC, VOC, SOC
89	Furniture Manufacturers	3-6	Database Inventory	VOC, SOC
90	Meat Processing	3-6	Database Inventory	IOC, Microbials
91	Boat Dealers	3-6	Database Inventory	VOC, SOC
92	Aircraft-Dealers	3-6	Database Inventory	VOC, SOC
93	Electric Companies	3-6	Database Inventory	IOC, VOC
94	NPDES Site	3-6	Database Inventory	IOC
95	Toxic Release Inventory	3-6	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
96	CERCLA Site	3-6	Database Inventory	IOC, VOC, SOC
97	CERCLA Site	3-6	Database Inventory	IOC, VOC, SOC
98	RCRA Site	3-6	Database Inventory	IOC, VOC, SOC
99	Mine/Quarry	3-6	Database Inventory	IOC, VOC, SOC
100	Deep Injection Well	3-6	Database Inventory	IOC, VOC, SOC
101	Deep Injection Well	3-6	Database Inventory	IOC, VOC, SOC
102	Deep Injection Well	3-6	Database Inventory	IOC, VOC, SOC
103	SARA Site	3-6	Database Inventory	IOC, VOC, SOC
104	SARA Site	3-6	Database Inventory	IOC, VOC, SOC
105	SARA Site	3-6	Database Inventory	VOC, SOC
106	SARA Site	3-6	Database Inventory	IOC, VOC, SOC
107	SARA Site	3-6	Database Inventory	VOC, SOC
108	SARA Site	3-6	Database Inventory	IOC, VOC, SOC
109	SARA Site	3-6	Database Inventory	IOC, VOC, SOC
110	SARA Site	3-6	Database Inventory	IOC, VOC, SOC
111	SARA Site	3-6	Database Inventory	IOC, VOC, SOC, Microbials
112	Recharge Point	3-6	Database Inventory	IOC, VOC, SOC
113	AST Site	3-6	Database Inventory	VOC, SOC
114	AST Site	3-6	Database Inventory	VOC, SOC
115	AST Site	3-6	Database Inventory	VOC, SOC
116	AST Site	3-6	Database Inventory	VOC, SOC
117	Group 1 Site	3-6	Database Inventory	SOC
120	LUST Site-Cleanup Completed; Impact:Groundwater	6-10	Database Inventory	VOC, SOC
121	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
122	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
123	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
124	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
125	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
126	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
127	LUST Site-Cleanup Completed; Impact:Groundwater	6-10	Database Inventory	VOC, SOC
128	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
129	LUST Site-Cleanup Completed; Impact Unknown	6-10	Database Inventory	VOC, SOC
130	LUST Site-Cleanup Incomplete; Impact Unknown	6-10	Database Inventory	VOC, SOC
131	LUST Site-Cleanup Incomplete; Impact Unknown	6-10	Database Inventory	VOC, SOC
132	UST Site-Contractor; Closed	6-10	Database Inventory	VOC, SOC
133	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
134	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
135	UST Site-Farm; Closed	6-10	Database Inventory	VOC, SOC
136	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
137	UST Site-Federal Non-Military; Closed	6-10	Database Inventory	VOC, SOC
138	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
139	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
140	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
141	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
142	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
143	UST Site-Farm; Closed	6-10	Database Inventory	VOC, SOC
144	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
145	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
146	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
147	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
148	UST Site-Industrial; Closed	6-10	Database Inventory	VOC, SOC
149	UST Site-Truck/Transporter; Open	6-10	Database Inventory	VOC, SOC
150	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
151	UST Site-Contractor; Open	6-10	Database Inventory	VOC, SOC
152	UST Site-Auto Dealership; Closed	6-10	Database Inventory	VOC, SOC
153	UST Site-Federal Military; Open	6-10	Database Inventory	VOC, SOC
154	UST Site-Contractor; Closed	6-10	Database Inventory	VOC, SOC
155	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
156	UST Site-Commercial; Closed	6-10	Database Inventory	VOC, SOC
157	UST Site-Truck/Transporter; Closed	6-10	Database Inventory	VOC, SOC
158	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
159	UST Site-State Government; Closed	6-10	Database Inventory	VOC, SOC
160	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
161	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
162	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC
163	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC
164	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC
165	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC
166	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
167	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
168	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
169	UST Site-Petroleum Distributor; Closed	6-10	Database Inventory	VOC, SOC
170	UST Site-Not Listed; Open	6-10	Database Inventory	VOC, SOC
171	UST Site-Not Listed; Open	6-10	Database Inventory	VOC, SOC
172	UST Site-Auto Dealership; Open	6-10	Database Inventory	VOC, SOC
173	UST Site-Truck/Transporter; Closed	6-10	Database Inventory	VOC, SOC
174	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
175	UST Site-Contractor; Closed	6-10	Database Inventory	VOC, SOC
176	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
177	UST Site-Not Listed; Open	6-10	Database Inventory	VOC, SOC
178	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
179	UST Site-Not Listed; Open	6-10	Database Inventory	VOC, SOC
180	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
181	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
182	UST Site-Commercial; Closed	6-10	Database Inventory	VOC, SOC
183	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
184	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
185	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
186	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
187	UST Site-Local Government; Open	6-10	Database Inventory	VOC, SOC
188	UST Site-Not Listed; Open	6-10	Database Inventory	VOC, SOC
189	UST Site-Petroleum Distributor; Open	6-10	Database Inventory	VOC, SOC
190	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC



Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
191	UST Site-Utilities; Open	6-10	Database Inventory	VOC, SOC
192	UST Site-Federal Non-Military; Closed	6-10	Database Inventory	VOC, SOC
193	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
194	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
195	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
196	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
197	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
198	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
199	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
200	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
201	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
202	UST Site-Not Listed; Open	6-10	Database Inventory	VOC, SOC
203	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
204	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
205	UST Site-Commercial; Closed	6-10	Database Inventory	VOC, SOC
206	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
207	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
208	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
209	UST Site-Industrial; Closed	6-10	Database Inventory	VOC, SOC
210	UST Site-Commercial; Closed	6-10	Database Inventory	VOC, SOC
211	UST Site-Not Listed; Closed	6-10	Database Inventory	VOC, SOC
212	UST Site-Commercial; Closed	6-10	Database Inventory	VOC, SOC
213	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC
214	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC
215	UST Site-Federal Non-Military; Open	6-10	Database Inventory	VOC, SOC
216	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
217	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
218	UST Site-Local Government; Open	6-10	Database Inventory	VOC, SOC
219	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
220	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
221	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
222	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
223	UST Site-Other; Closed	6-10	Database Inventory	VOC, SOC
224	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
225	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
226	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
227	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
228	UST Site-Contractor; Closed	6-10	Database Inventory	VOC, SOC
229	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
230	UST Site-Industrial; Closed	6-10	Database Inventory	VOC, SOC
231	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
232	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
233	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
234	UST Site-Auto Dealership; Closed	6-10	Database Inventory	VOC, SOC
235	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
236	UST Site-Federal Non-Military; Open	6-10	Database Inventory	VOC, SOC
237	UST Site-Auto Dealership; Closed	6-10	Database Inventory	VOC, SOC
238	UST Site-Auto Dealership; Closed	6-10	Database Inventory	VOC, SOC
239	UST Site-Petroleum Distributor; Closed	6-10	Database Inventory	VOC, SOC
240	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
241	UST Site-Local Government; Closed	6-10	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
242	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
243	UST Site-Gas Station; Closed	6-10	Database Inventory	VOC, SOC
244	UST Site-Gas Station; Open	6-10	Database Inventory	VOC, SOC
245	UST Site-Auto Dealership; Closed	6-10	Database Inventory	VOC, SOC
246	UST Site-Commercial; Closed	6-10	Database Inventory	VOC, SOC
247	Laundries	6-10	Database Inventory	SOC
248	Welding	6-10	Database Inventory	IOC, VOC
249	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
250	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
251	Pest Control	6-10	Database Inventory	SOC
252	Auto Radiator-Repair	6-10	Database Inventory	IOC, VOC, SOC
253	Tools-Pneumatic (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
254	Auto Parts-Used & Rebuilt (Wholesale)	6-10	Database Inventory	VOC, SOC
255	Limousine Service	6-10	Database Inventory	VOC, SOC
256	Plumbing Drain & Sewer Cleaning	6-10	Database Inventory	IOC, VOC, Microbials
257	Hardware-Retail	6-10	Database Inventory	IOC, VOC, SOC
258	Farm Equipment (Wholesale)	6-10	Database Inventory	VOC, SOC
259	Rental Service-Stores & Yards	6-10	Database Inventory	VOC, SOC
260	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
261	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
262	Engines-Rebuild & Repair	6-10	Database Inventory	IOC, VOC, SOC
263	Potato Harvesting/Planting Equipment	6-10	Database Inventory	VOC, SOC
264	Farm Equipment (Wholesale)	6-10	Database Inventory	VOC, SOC
265	Trucking-Motor Freight	6-10	Database Inventory	VOC, SOC
266	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
267	Fire Damage Restoration	6-10	Database Inventory	VOC, SOC
268	Lawn Maintenance	6-10	Database Inventory	IOC, SOC
269	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
270	Laboratories-Medical	6-10	Database Inventory	IOC, VOC, SOC, Microbials
271	Tree Service	6-10	Database Inventory	VOC, SOC
272	Bicycles-Dealers	6-10	Database Inventory	VOC, SOC
273	Excavating Contractors	6-10	Database Inventory	IOC, VOC, SOC
274	Truck-Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
275	Hospitals	6-10	Database Inventory	IOC, SOC, Microbials
276	Pharmaceutical Products (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
277	Contractors- Equipment/Supplies/Dealers	6-10	Database Inventory	IOC, VOC, SOC
278	Automobile Renting & Leasing	6-10	Database Inventory	VOC, SOC
279	Boat Repairing	6-10	Database Inventory	IOC, VOC, SOC
280	Satellite Equipment & Systems Manufacturers	6-10	Database Inventory	IOC, VOC
281	Plumbing Drain & Sewer Cleaning	6-10	Database Inventory	IOC, VOC, Microbials
282	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
283	Hardware (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
284	Landscape Contractors	6-10	Database Inventory	IOC, VOC, SOC
285	Mufflers & Exhaust Systems-Engine	6-10	Database Inventory	IOC, VOC, SOC
286	Parking Area Maintenance & Marking	6-10	Database Inventory	VOC, SOC
287	Auto Detail & Clean-Up Service	6-10	Database Inventory	IOC, VOC, SOC
288	Auto Body Shop Equipment/Supplies (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
289	Automobile Customizing	6-10	Database Inventory	IOC, VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
290	Plating Manufacturers	6-10	Database Inventory	IOC, VOC
291	Automobile Customizing	6-10	Database Inventory	IOC, VOC, SOC
292	Packaging Machinery-Wholesale	6-10	Database Inventory	VOC
293	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
294	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
295	Springs-Auto Sales & Service	6-10	Database Inventory	VOC, SOC
296	Farm Supplies (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
297	Wood Products-Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
298	Automobile Dealers-New Cars	6-10	Database Inventory	VOC, SOC
299	Bags-Plastic (Manufacturers)	6-10	Database Inventory	VOC, SOC
300	Sausages/Other Prepared Meat Products	6-10	Database Inventory	IOC, Microbials
301	Printers	6-10	Database Inventory	VOC
302	Home Improvements	6-10	Database Inventory	IOC, VOC, SOC
303	Plumbing Drain & Sewer Cleaning	6-10	Database Inventory	IOC, VOC, Microbials
304	Paving Contractors	6-10	Database Inventory	VOC, SOC
305	Paint-Retail	6-10	Database Inventory	VOC
306	Carpet & Rug Cleaners	6-10	Database Inventory	VOC
307	Tire-Dealers Retail	6-10	Database Inventory	VOC, SOC
308	Tire-Dealers Retail	6-10	Database Inventory	VOC, SOC
309	Bicycles-Dealers	6-10	Database Inventory	VOC, SOC
310	Motorcycles & Motor Scooters- Dealers	6-10	Database Inventory	VOC, SOC
311	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
312	Recreational Vehicles	6-10	Database Inventory	VOC, SOC
313	Outboard Motors	6-10	Database Inventory	VOC, SOC
314	Auto Radiator-Repair	6-10	Database Inventory	IOC, VOC, SOC
315	Auto Parts-Used & Rebuilt (Wholesale)	6-10	Database Inventory	VOC, SOC
316	Motorcycles & Motor Scooters- Dealers	6-10	Database Inventory	VOC, SOC
317	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
318	Funeral Directors	6-10	Database Inventory	VOC
319	Funeral Directors	6-10	Database Inventory	VOC
320	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
321	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
322	Auto Restoration-Antiques	6-10	Database Inventory	IOC, VOC, SOC
323	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
324	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
325	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
326	Wheel Alignment-Frame & Axle Service	6-10	Database Inventory	VOC, SOC
327	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
328	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
329	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
330	Newspapers (Publishers)	6-10	Database Inventory	IOC, VOC
331	Boat Dealers	6-10	Database Inventory	VOC, SOC
332	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
333	Car Washing & Polishing	6-10	Database Inventory	IOC, VOC, SOC, Microbials
334	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
335	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
336	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
337	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
338	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
339	Recreational Vehicles	6-10	Database Inventory	VOC, SOC
340	Lawn Mowers	6-10	Database Inventory	VOC, SOC
341	Dairy Products-Wholesale	6-10	Database Inventory	IOC, Microbials
342	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
343	Auto Parts-Used & Rebuilt (Wholesale)	6-10	Database Inventory	VOC, SOC
344	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
345	Store Fronts	6-10	Database Inventory	IOC, VOC
346	Service Stations-Gasoline & Oil	6-10	Database Inventory	VOC, SOC
347	Landscape Contractors	6-10	Database Inventory	IOC, VOC, SOC
348	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
349	Pet Services	6-10	Database Inventory	IOC, Microbials
350	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
351	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
352	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
353	Bottlers	6-10	Database Inventory	VOC
354	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
355	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
356	Funeral Directors	6-10	Database Inventory	VOC
357	Welding	6-10	Database Inventory	IOC, VOC
358	Electric Equipment & Supplies- Wholesale	6-10	Database Inventory	IOC, VOC
359	Culverts	6-10	Database Inventory	VOC, SOC
360	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
361	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
362	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
363	Shelving Manufacturers	6-10	Database Inventory	VOC
364	Home Builders	6-10	Database Inventory	IOC, VOC, SOC
365	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
366	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
367	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
368	Electric Equipment & Supplies- Wholesale	6-10	Database Inventory	IOC, VOC
369	Truck-Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
370	Concrete Contractors	6-10	Database Inventory	IOC, VOC, SOC
371	Cleaners	6-10	Database Inventory	VOC
372	Lawn Mowers-Sharpen & Repair	6-10	Database Inventory	IOC, VOC, SOC
373	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
374	Playground Equipment Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
375	Snow Removal Equipment Retail	6-10	Database Inventory	VOC, SOC
376	Decals Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
377	Janitors Supplies (Wholesale)	6-10	Database Inventory	VOC
378	Crop Planting Cultivating & Protection	6-10	Database Inventory	IOC, VOC, SOC
379	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
380	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
381	Truck-Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
382	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
383	Fire Damage Restoration	6-10	Database Inventory	VOC, SOC
384	Converted Paper/Paperboard Products	6-10	Database Inventory	SOC
385	Goldsmiths & Silversmiths	6-10	Database Inventory	IOC, VOC
386	Fuel Injection Equipment Repair	6-10	Database Inventory	IOC, VOC, SOC
387	Printers	6-10	Database Inventory	VOC
388	Landscape Contractors	6-10	Database Inventory	IOC, VOC, SOC
389	Motorcycles & Motor Scooters-Repair & Service	6-10	Database Inventory	IOC, VOC, SOC
390	Recreational Vehicles-Repair & Service	6-10	Database Inventory	IOC, VOC, SOC
391	Logging Companies	6-10	Database Inventory	VOC, SOC
392	Powder Coatings Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
393	Paint-Retail	6-10	Database Inventory	VOC
394	Railroads	6-10	Database Inventory	IOC, VOC, SOC, Microbials
395	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
396	Taxicabs	6-10	Database Inventory	VOC, SOC
397	Water Treatment Equip Service & Supplies	6-10	Database Inventory	IOC, SOC
398	Machine Shops	6-10	Database Inventory	IOC, VOC, SOC
399	Drapery & Curtain Cleaners	6-10	Database Inventory	VOC
400	Electric Equipment & Supplies- Wholesale	6-10	Database Inventory	IOC, VOC
401	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
402	Castings-Metals	6-10	Database Inventory	IOC, VOC
403	Movers	6-10	Database Inventory	VOC, SOC
404	Automobile Renting & Leasing	6-10	Database Inventory	VOC, SOC
405	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
406	Plants-Interior Design & Maintenance	6-10	Database Inventory	IOC, SOC
407	Janitor Service	6-10	Database Inventory	VOC
408	Batteries-Storage (Wholesale)	6-10	Database Inventory	IOC
409	Feed (Wholesale)	6-10	Database Inventory	IOC, SOC, Microbials
410	Plumbing Fixtures & Supplies (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
411	Commercial Printing	6-10	Database Inventory	IOC, VOC
412	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
413	Water & Sewage Companies-Utility	6-10	Database Inventory	IOC, VOC, Microbials
414	Screen Printing	6-10	Database Inventory	VOC
415	Ice Cream & Frozen Desserts Manufacturers	6-10	Database Inventory	IOC, Microbials
416	Auto Seatcovers Tops & Upholstery	6-10	Database Inventory	VOC, SOC
417	Oils-Fuel (Wholesale)	6-10	Database Inventory	VOC, SOC
418	Fire Departments	6-10	Database Inventory	VOC, SOC
419	Fire Departments	6-10	Database Inventory	VOC, SOC
420	Fire Damage Restoration	6-10	Database Inventory	VOC, SOC
421	Fire Departments	6-10	Database Inventory	VOC, SOC
422	Fire Protection Equipment & Supplies	6-10	Database Inventory	VOC, SOC
423	Welding	6-10	Database Inventory	IOC, VOC
424	Material Handling Equipment (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
425	Sun Rooms	6-10	Database Inventory	IOC, VOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
426	Home Builders	6-10	Database Inventory	IOC, VOC, SOC
427	Photographic Equipment-Repair	6-10	Database Inventory	VOC
428	Tire-Dealers Retail	6-10	Database Inventory	VOC, SOC
429	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
430	Bags-Plastic (Manufacturers)	6-10	Database Inventory	VOC, SOC
431	Paving Contractors	6-10	Database Inventory	VOC, SOC
432	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
433	Livestock Hauling	6-10	Database Inventory	VOC, SOC
434	Building Contractors	6-10	Database Inventory	IOC, VOC, SOC
435	Paint-Retail	6-10	Database Inventory	VOC
436	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
437	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
438	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
439	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
440	Wrecker Service	6-10	Database Inventory	IOC, VOC, SOC
441	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
442	Tile-Ceramic-Contractors & Dealers	6-10	Database Inventory	VOC, SOC
443	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
444	Septic Tanks-Cleaning & Repair	6-10	Database Inventory	IOC, VOC, Microbials
445	Tree Service	6-10	Database Inventory	VOC, SOC
446	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
447	Publishers-Periodical	6-10	Database Inventory	IOC, VOC
448	Photographers-Portrait	6-10	Database Inventory	VOC
449	Home Improvements	6-10	Database Inventory	IOC, VOC, SOC
450	Concrete Contractors	6-10	Database Inventory	IOC, VOC, SOC
451	Carpet & Rug Cleaners	6-10	Database Inventory	VOC
452	Wrecker Service	6-10	Database Inventory	IOC, VOC, SOC
453	Janitor Service	6-10	Database Inventory	VOC
454	Recreational Vehicles	6-10	Database Inventory	VOC, SOC
455	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
456	Lawn Mowers	6-10	Database Inventory	VOC, SOC
457	Chemicals (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
458	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
459	Hydraulic Equipment & Supplies (Wholesale)	6-10	Database Inventory	VOC, SOC
460	Barbers Equipment & Supplies Manufacturers	6-10	Database Inventory	VOC, SOC
461	Canvas Goods Manufacturers	6-10	Database Inventory	VOC
462	Ambulance Service	6-10	Database Inventory	VOC, SOC
463	Water Treatment Equip Service & Supplies	6-10	Database Inventory	IOC, SOC
464	Fire Departments	6-10	Database Inventory	VOC, SOC
465	Foundries-Steel	6-10	Database Inventory	IOC, VOC, SOC
466	Parking Area Maintenance & Marking	6-10	Database Inventory	VOC, SOC
467	Hospitals	6-10	Database Inventory	IOC, SOC, Microbials
468	Parking Area Maintenance & Marking	6-10	Database Inventory	VOC, SOC
469	Water & Sewage Companies-Utility	6-10	Database Inventory	IOC, VOC, Microbials
470	Livestock Auction Markets	6-10	Database Inventory	IOC, Microbials
471	Truck Equipment & Parts (Wholesale)	6-10	Database Inventory	VOC, SOC
472	Steel Fabricators	6-10	Database Inventory	IOC, VOC
473	Trailers-Truck (Wholesale)	6-10	Database Inventory	VOC, SOC
474	Radio/TV Broadcast/Communications Equipment	6-10	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
475	Photo Finishing-Retail	6-10	Database Inventory	VOC
476	Snow Removal Service	6-10	Database Inventory	VOC, SOC
477	Trailer-Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
478	Prefabricated Metal Buildings Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
479	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
480	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
481	Sewage Disposal Systems	6-10	Database Inventory	IOC, VOC, SOC, Microbials
482	Excavating Contractors	6-10	Database Inventory	IOC, VOC, SOC
483	Grain Elevators	6-10	Database Inventory	IOC, SOC, Microbials
484	Tire-Dealers Retail	6-10	Database Inventory	VOC, SOC
485	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
486	Machine Shops	6-10	Database Inventory	IOC, VOC, SOC
487	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
488	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
489	Engravers-Glassware Manufacturers	6-10	Database Inventory	VOC, SOC
490	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
491	Cabinets Manufacturers	6-10	Database Inventory	VOC, SOC
492	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
493	Tile-Ceramic-Contractors & Dealers	6-10	Database Inventory	VOC, SOC
494	Motorcycles & Motor Scooters-Repair & Service	6-10	Database Inventory	IOC, VOC, SOC
495	Publishers-Periodical	6-10	Database Inventory	IOC, VOC
496	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
497	Potato Processing Equipment Manufacturers	6-10	Database Inventory	VOC, SOC
498	Lawn Mowers	6-10	Database Inventory	VOC, SOC
499	Auto Parts & Supplies Wholesale)	6-10	Database Inventory	VOC, SOC
500	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
501	Painters	6-10	Database Inventory	VOC
502	Paving Contractors	6-10	Database Inventory	VOC, SOC
503	Dresses Manufacturers	6-10	Database Inventory	VOC
504	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
505	Stereophonic & High Fidelity Equipment	6-10	Database Inventory	IOC, VOC
506	Tree Service	6-10	Database Inventory	VOC, SOC
507	Lawn Maintenance	6-10	Database Inventory	IOC, SOC
508	Tire-Dealers Retail	6-10	Database Inventory	VOC, SOC
509	Tire-Dealers Retail	6-10	Database Inventory	VOC, SOC
510	Transmissions-Automobile	6-10	Database Inventory	IOC, VOC, SOC
511	Wheel Alignment-Frame & Axle Service	6-10	Database Inventory	VOC, SOC
512	Welding Equipment & Supplies (Wholesale)	6-10	Database Inventory	IOC, VOC
513	Sporting Goods Manufacturers	6-10	Database Inventory	VOC
514	Printers	6-10	Database Inventory	VOC
515	Home Builders	6-10	Database Inventory	IOC, VOC, SOC
516	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
517	Wrecker Service	6-10	Database Inventory	IOC, VOC, SOC
518	Sportswear-Mens Manufacturers	6-10	Database Inventory	VOC
519	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
520	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC



Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
521	Tile-Ceramic-Contractors & Dealers	6-10	Database Inventory	VOC, SOC
522	Drilling & Boring Contractors	6-10	Database Inventory	VOC
523	Ornamental Metal Work Manufacturers	6-10	Database Inventory	IOC, VOC
524	Dairy Products-Wholesale	6-10	Database Inventory	IOC, Microbials
525	Mufflers & Exhaust Systems-Engine	6-10	Database Inventory	IOC, VOC, SOC
526	Typesetting (Manufacturers)	6-10	Database Inventory	VOC
527	Movers	6-10	Database Inventory	VOC, SOC
528	Mufflers & Exhaust Systems-Engine	6-10	Database Inventory	IOC, VOC, SOC
529	Trucking-Motor Freight	6-10	Database Inventory	VOC, SOC
530	Concrete Contractors	6-10	Database Inventory	IOC, VOC, SOC
531	Ornamental Metal Work Manufacturers	6-10	Database Inventory	IOC, VOC
532	Wrecker Service	6-10	Database Inventory	IOC, VOC, SOC
533	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
534	Trucking-Heavy Hauling	6-10	Database Inventory	VOC, SOC
535	Livestock-Dealers (Wholesale)	6-10	Database Inventory	IOC, Microbials
536	Truck Equipment & Parts (Wholesale)	6-10	Database Inventory	VOC, SOC
537	State Government-National Security	6-10	Database Inventory	VOC, SOC
538	Wrecker Service	6-10	Database Inventory	IOC, VOC, SOC
539	Landscape Contractors	6-10	Database Inventory	IOC, VOC, SOC
540	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
541	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
542	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
543	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
544	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
545	Artificial Limbs-Manufacturers	6-10	Database Inventory	VOC
546	Printers	6-10	Database Inventory	VOC
547	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
548	Photographers-Portrait	6-10	Database Inventory	VOC
549	Photo Finishing-Retail	6-10	Database Inventory	VOC
550	Photo Finishing-Retail	6-10	Database Inventory	VOC
551	Service Stations-Gasoline & Oil	6-10	Database Inventory	VOC, SOC
552	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
553	Recycling Centers (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
554	Brake Service	6-10	Database Inventory	IOC, VOC, SOC
555	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
556	Drapery & Curtain Cleaners	6-10	Database Inventory	VOC
557	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
558	Remodeling/Repairing Building Contractors	6-10	Database Inventory	IOC, VOC, SOC
559	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
560	Gas Companies	6-10	Database Inventory	VOC, SOC
561	Delivery Service	6-10	Database Inventory	VOC, SOC
562	Barbers Equipment & Supplies (Wholesale)	6-10	Database Inventory	VOC, SOC
563	Auto Machine Shop Service	6-10	Database Inventory	IOC, VOC, SOC
564	Photo Finishing-Retail	6-10	Database Inventory	VOC
565	Pest Control	6-10	Database Inventory	SOC
566	Golf Courses-Public	6-10	Database Inventory	IOC, VOC, SOC
567	Home Builders	6-10	Database Inventory	IOC, VOC, SOC
568	Plastics-High Pressure Laminates	6-10	Database Inventory	VOC, SOC
569	Printers	6-10	Database Inventory	VOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
570	Newspapers (Publishers)	6-10	Database Inventory	IOC, VOC
571	Boat Repairing	6-10	Database Inventory	IOC, VOC, SOC
572	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
573	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
574	Hardware (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
575	Excavating Contractors	6-10	Database Inventory	IOC, VOC, SOC
576	Boat Dealers	6-10	Database Inventory	VOC, SOC
577	Printers	6-10	Database Inventory	VOC
578	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
579	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
580	Relays & Industrial Controls Manufacturers	6-10	Database Inventory	VOC, SOC
581	Trailers-Camping & Travel	6-10	Database Inventory	VOC, SOC
582	Snow Removal Equipment Retail	6-10	Database Inventory	VOC, SOC
583	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
584	Industrial Measuring Manufacturers	6-10	Database Inventory	VOC, SOC
585	Rental Service-Stores & Yards	6-10	Database Inventory	VOC, SOC
586	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
587	Painters	6-10	Database Inventory	VOC
588	Four Wheel Drive-Repair & Service	6-10	Database Inventory	IOC, VOC, SOC
589	Landscape Contractors	6-10	Database Inventory	IOC, VOC, SOC
590	Storage-Household & Commercial	6-10	Database Inventory	IOC, VOC, SOC
591	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
592	Bicycles-Dealers	6-10	Database Inventory	VOC, SOC
593	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
594	Rope Manufacturers	6-10	Database Inventory	VOC, SOC
595	Brick-Clay Common & Face Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
596	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
597	Automobile Dealers-New Cars	6-10	Database Inventory	VOC, SOC
598	Auto Parts-Used & Rebuilt (Wholesale)	6-10	Database Inventory	VOC, SOC
599	Bicycles-Dealers	6-10	Database Inventory	VOC, SOC
600	Florists-Supplies (Wholesale)	6-10	Database Inventory	IOC
601	Automobile Parts & Supplies-Retail	6-10	Database Inventory	VOC, SOC
602	Truck Renting & Leasing	6-10	Database Inventory	VOC, SOC
603	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
604	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
605	Printers	6-10	Database Inventory	VOC
606	Campgrounds	6-10	Database Inventory	IOC, VOC, SOC, Microbials
607	Paint-Retail	6-10	Database Inventory	VOC
608	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
609	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
610	Bicycles-Dealers	6-10	Database Inventory	VOC, SOC
611	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
612	Automobile Dealers-New Cars	6-10	Database Inventory	VOC, SOC
613	Bathtubs & Sinks-Repair & Refinish	6-10	Database Inventory	IOC, VOC, SOC
614	Laboratories-Medical	6-10	Database Inventory	IOC, VOC, SOC, Microbials
615	Photographers-Portrait	6-10	Database Inventory	VOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
616	Car Washing & Polishing	6-10	Database Inventory	IOC, VOC, SOC, Microbials
617	Washers-Pressure	6-10	Database Inventory	IOC, VOC, SOC, Microbials
618	Electric Equipment & Supplies- Wholesale	6-10	Database Inventory	IOC, VOC
619	Landscape Contractors	6-10	Database Inventory	IOC, VOC, SOC
620	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
621	Transmissions-Truck Tractor Etc	6-10	Database Inventory	VOC, SOC
622	Paint-Retail	6-10	Database Inventory	VOC
623	Machine Shops	6-10	Database Inventory	IOC, VOC, SOC
624	Machine Shops	6-10	Database Inventory	IOC, VOC, SOC
625	Tile-Ceramic-Contractors & Dealers	6-10	Database Inventory	VOC, SOC
626	Farm Supplies (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
627	Auto Radiator-Repair	6-10	Database Inventory	IOC, VOC, SOC
628	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
629	Photographers-Portrait	6-10	Database Inventory	VOC
630	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
631	Puzzles Manufacturers	6-10	Database Inventory	VOC
632	Steel Fabricators	6-10	Database Inventory	IOC, VOC
633	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
634	Campgrounds	6-10	Database Inventory	IOC, VOC, SOC, Microbials
635	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
636	Carpet & Rug Cleaners	6-10	Database Inventory	VOC
637	Car Washing & Polishing	6-10	Database Inventory	IOC, VOC, SOC, Microbials
638	Painters	6-10	Database Inventory	VOC
639	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
640	Cleaners	6-10	Database Inventory	VOC
641	Laboratories-Medical	6-10	Database Inventory	IOC, VOC, SOC, Microbials
642	X-Ray Laboratories-Medical	6-10	Database Inventory	IOC, VOC, SOC
643	Auto Detail & Clean-Up Service	6-10	Database Inventory	IOC, VOC, SOC
644	Newspapers (Publishers)	6-10	Database Inventory	IOC, VOC
645	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
646	Recycling Centers (Wholesale)	6-10	Database Inventory	IOC, VOC, SOC
647	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
648	Fire Damage Restoration	6-10	Database Inventory	VOC, SOC
649	Pet Services	6-10	Database Inventory	IOC, Microbials
650	Automobile Body-Repairing & Painting	6-10	Database Inventory	IOC, VOC, SOC
651	Tractor-Dealers (Wholesale)	6-10	Database Inventory	VOC, SOC
652	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
653	Laboratories-Dental	6-10	Database Inventory	IOC, VOC, SOC, Microbials
654	Janitor Service	6-10	Database Inventory	VOC
655	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
656	Publishers-Directory & Guide	6-10	Database Inventory	IOC, VOC
657	Automobile Renting & Leasing	6-10	Database Inventory	VOC, SOC
658	Trucking-Motor Freight	6-10	Database Inventory	VOC, SOC
659	Truck Renting & Leasing	6-10	Database Inventory	VOC, SOC
660	Truck Renting & Leasing	6-10	Database Inventory	VOC, SOC
661	Truck Renting & Leasing	6-10	Database Inventory	VOC, SOC
662	Truck Renting & Leasing	6-10	Database Inventory	VOC, SOC
663	Microfilm Service Equipment & Supplies	6-10	Database Inventory	VOC
664	Federal Government-National Security	6-10	Database Inventory	VOC, SOC
665	Service Stations-Gasoline & Oil	6-10	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
666	Snowmobiles	6-10	Database Inventory	VOC, SOC
667	Printers	6-10	Database Inventory	VOC
668	Auto Parts-Used & Rebuilt (Wholesale)	6-10	Database Inventory	VOC, SOC
669	Sheet Metal Work Contractors	6-10	Database Inventory	IOC, VOC
670	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
671	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
672	Excavating Contractors	6-10	Database Inventory	IOC, VOC, SOC
673	Excavating Contractors	6-10	Database Inventory	IOC, VOC, SOC
674	Automobile Repairing & Service	6-10	Database Inventory	IOC, VOC, SOC
675	Dairies	6-10	Database Inventory	IOC, Microbials
676	Trucking-Heavy Hauling	6-10	Database Inventory	VOC, SOC
677	Controls Systems/Regulators	6-10	Database Inventory	IOC, VOC, SOC
678	Wheels	6-10	Database Inventory	VOC, SOC
679	Ornamental Metal Work Manufacturers	6-10	Database Inventory	IOC, VOC
680	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
681	Veterinarians	6-10	Database Inventory	IOC, VOC, Microbials
682	Lawn & Garden Equipment & Supplies	6-10	Database Inventory	IOC, SOC
683	Funeral Directors	6-10	Database Inventory	VOC
684	Automobile Dealers-Used Cars	6-10	Database Inventory	VOC, SOC
685	Oils-Fuel (Wholesale)	6-10	Database Inventory	VOC, SOC
686	Roofing Contractors	6-10	Database Inventory	IOC, VOC, SOC
687	Service Stations-Gasoline & Oil	6-10	Database Inventory	VOC, SOC
688	Service Stations-Gasoline & Oil	6-10	Database Inventory	VOC, SOC
689	Automobile Lubrication Service	6-10	Database Inventory	IOC, VOC, SOC
690	Signs Manufacturers	6-10	Database Inventory	IOC, VOC, SOC
691	Printers	6-10	Database Inventory	VOC
692	Boilers-Repairing & Cleaning	6-10	Database Inventory	VOC
693	Signs (Manufacturers)	6-10	Database Inventory	IOC, VOC, SOC
694	Parking Area Maintenance	6-10	Database Inventory	VOC, SOC
695	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
696	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
697	Transportation	6-10	Database Inventory	VOC, SOC
698	Retailers	6-10	Database Inventory	IOC, Microbials
699	Retail - Grocery	6-10	Database Inventory	IOC, Microbials
700	Cabinets-Manufacturers	6-10	Database Inventory	VOC, SOC
701	Retailer-Applicances	6-10	Database Inventory	VOC
702	Mechanical Contractors	6-10	Database Inventory	IOC, VOC, SOC
703	Coatings-Protective-Manufacturer	6-10	Database Inventory	VOC
704	Cabinet Makers	6-10	Database Inventory	VOC, SOC
705	Concrete Contractors	6-10	Database Inventory	IOC, VOC, SOC
706	Carpet & Upholstery	6-10	Database Inventory	VOC
707	Overhead Doors	6-10	Database Inventory	IOC, VOC
708	Concrete Contractors	6-10	Database Inventory	IOC, VOC, SOC
709	Refrigerating Equipment-Commercial	6-10	Database Inventory	VOC
710	General Contractors	6-10	Database Inventory	IOC, VOC, SOC
711	Electric Equipment & Supplies	6-10	Database Inventory	IOC, VOC
712	Storage	6-10	Database Inventory	IOC, VOC, SOC
713	Lawn Maintenance	6-10	Database Inventory	IOC, SOC
714	Printing	6-10	Database Inventory	IOC, VOC
715	Toxic Release Inventory	6-10	Database Inventory	VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
716	CERCLA Site	6-10	Database Inventory	IOC, VOC, SOC
717	CERCLA Site	6-10	Database Inventory	IOC, VOC, SOC
718	RCRA Site	6-10	Database Inventory	VOC, SOC
719	RCRA Site	6-10	Database Inventory	VOC, SOC
720	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
721	RCRA Site	6-10	Database Inventory	VOC
722	RCRA Site	6-10	Database Inventory	VOC, SOC
723	RCRA Site	6-10	Database Inventory	VOC
724	RCRA Site	6-10	Database Inventory	VOC
725	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
726	RCRA Site	6-10	Database Inventory	VOC
727	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
728	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
729	RCRA Site	6-10	Database Inventory	VOC, SOC
730	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC, Microbials
731	RCRA Site	6-10	Database Inventory	VOC, SOC
732	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
733	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC, Microbials
734	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
735	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
736	RCRA Site	6-10	Database Inventory	VOC
737	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
738	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
739	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
740	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
741	RCRA Site	6-10	Database Inventory	VOC
742	RCRA Site	6-10	Database Inventory	VOC, SOC
743	RCRA Site	6-10	Database Inventory	IOC, VOC
744	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
745	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
746	RCRA Site	6-10	Database Inventory	VOC
747	RCRA Site	6-10	Database Inventory	VOC, SOC
748	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
749	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
750	RCRA Site	6-10	Database Inventory	IOC, VOC, SOC
751	RCRA Site	6-10	Database Inventory	IOC, Microbials
752	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
753	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
754	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
755	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
756	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
757	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
758	Mine/Quarry	6-10	Database Inventory	IOC, VOC, SOC
759	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
760	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
761	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
762	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
763	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
764	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
765	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
766	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
767	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
768	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
769	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
770	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
771	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
772	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
773	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
774	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
775	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
776	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
777	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
778	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
779	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
780	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
781	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
782	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
783	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
784	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
785	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
786	Deep Injection Well	6-10	Database Inventory	IOC, VOC, SOC
787	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
788	SARA Site	6-10	Database Inventory	VOC, SOC
789	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
790	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
791	SARA Site	6-10	Database Inventory	IOC, VOC
792	SARA Site	6-10	Database Inventory	IOC
793	SARA Site	6-10	Database Inventory	VOC, SOC
794	SARA Site	6-10	Database Inventory	IOC, VOC, SOC, Microbials
795	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
796	SARA Site	6-10	Database Inventory	IOC, VOC
797	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
798	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
799	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
800	SARA Site	6-10	Database Inventory	VOC, SOC
801	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
802	SARA Site	6-10	Database Inventory	VOC, SOC
803	SARA Site	6-10	Database Inventory	VOC, SOC
804	SARA Site	6-10	Database Inventory	VOC, SOC
805	SARA Site	6-10	Database Inventory	VOC, SOC
806	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
807	SARA Site	6-10	Database Inventory	VOC, SOC
808	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
809	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
810	SARA Site	6-10	Database Inventory	VOC, SOC
811	SARA Site	6-10	Database Inventory	IOC, VOC, SOC
812	SARA Site	6-10	Database Inventory	VOC, SOC
813	Recharge Point	6-10	Database Inventory	IOC, VOC, SOC
814	Recharge Point	6-10	Database Inventory	IOC, VOC, SOC
815	AST Site	6-10	Database Inventory	VOC, SOC
816	AST Site	6-10	Database Inventory	VOC, SOC
817	AST Site	6-10	Database Inventory	VOC, SOC
818	AST Site	6-10	Database Inventory	VOC, SOC
819	AST Site	6-10	Database Inventory	VOC, SOC
820	Group 1 Site	6-10	Database Inventory	VOC
821	Landfill	6-10	Database Inventory	IOC, VOC, SOC

Site	Source Description <sup>1</sup>	TOT Zone (in years) <sup>2</sup>	Source Information	Potential Contaminants <sup>3</sup>
822	Landfill	6-10	Database Inventory	IOC, VOC, SOC
823	Landfill	6-10	Database Inventory	IOC, VOC, SOC
824	Landfill	6-10	Database Inventory	IOC, VOC, SOC

Site # are non-sequential

<sup>1</sup> SARA = Superfund Amendments and Reauthorization Act, RCRA = Resource Conservation Recovery Act, CERCLA = Comprehensive Environmental Response Compensation and Liability Act, NPDES = National Pollutant Discharge Elimination System, UST = underground storage tank, LUST = leaking underground storage tank

AST = aboveground storage tank

<sup>2</sup> TOT = time-of-travel (in years) for a potential contaminant to reach the wellhead

<sup>3</sup> IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

## APPENDIX B

### City of Firth Delineation and Potential Contaminant Source Location Map



## APPENDIX C

### City of Firth Susceptibility Analysis Worksheets

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

13 High Susceptibility

1. System Construction		SCORE			
Drill Date	10/26/35				
Driller Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES	2002			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		6			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	YES	YES	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		4	2	4	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	29	51	39	11
(Score = # Sources X 2 ) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	30	51	18	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	0	0	2	0
Land use Zone 1B Greater Than 50% Irrigated Agricultural Land		4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		16	16	18	12
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II Greater Than 50% Irrigated Agricultural Land		2	2	2	
Potential Contaminant Source / Land Use Score - Zone II		5	5	5	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		2	2	2	0
Cumulative Potential Contaminant / Land Use Score		27	25	29	14
4. Final Susceptibility Source Score		17	17	18	17
5. Final Well Ranking		High	High	High	High

1. System Construction		SCORE			
Drill Date	10/17/61				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	2002			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		5			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	YES	2	0	2	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	YES	YES	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		4	2	4	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	29	51	39	11
(Score = # Sources X 2 ) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	30	51	18	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	0	0	2	0
Land use Zone 1B Greater Than 50% Irrigated Agricultural Land		4	4	4	4
Total Potential Contaminant Source / Land Use Score - Zone 1B		16	16	18	12
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II Greater Than 50% Irrigated Agricultural Land		2	2	2	
Potential Contaminant Source / Land Use Score - Zone II		5	5	5	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		2	2	2	0
Cumulative Potential Contaminant / Land Use Score		27	25	29	14
4. Final Susceptibility Source Score		16	16	17	16
5. Final Well Ranking		High	High	High	High